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10/576,213	04/17/2006	Masashi Goto	504781500	6951

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EXAMINER
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MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
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2879

MAIL DATE	DELIVERY MODE
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09/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/576,213

Applicant(s)

GOTO ET AL.

Examiner

Peter J. Macchiarolo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 04/17/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 04/17/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Objections***

**Claims 1 and 8 are objected to because of the following informalities:**

Claim 1 recites, "that respectively belong each of the pair display electrodes." For the purpose of examination, the examiner reads, "that respectively belong to each of the pair of display electrodes." Appropriate correction is required.

Claim 8 recites, "the main discharge gaps." There is not proper antecedent basis for this limitation. For the purpose of examination, the Examiner reads "a main discharge gap."

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 1, 3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by**

**Namiki et al (USPN 6157128; "Namiki").**

Regarding claim 1, Namiki discloses at least in figures 1 and 2 a plasma display panel in which a plurality of pairs of display electrodes (X,Y) extending in a row direction are aligned on a surface of a first substrate (11), a plurality of address electrodes (A) extending in a column direction are disposed in a stripe pattern on a surface of a second substrate (21), the first and second substrates are disposed opposite each other so that the pairs of display electrodes and the address electrodes cross over sandwiching discharge space therebetween, and a discharge cell (30) is formed corresponding to each crossover portion, wherein the pairs of display electrodes (X,Y) are composed of a metallic material (see at least col. 4, ll. 27-55), each display electrode of each pair of display electrodes (X,Y) comprises a base part (x11) extending in the row direction and a plurality of opposing parts (x12) extending from the base part into a discharge interval between the each pair of display electrodes, and in each discharge cell, at least two discharge starting gaps (d) are formed, each discharge starting gap (d) existing between opposing parts (x12, y12) that respectively belong to each of the pair of display electrodes (X,Y) and being at least partially over the address electrode (A), and discharge space (not labeled) existing between the each discharge starting gap (d) and the address electrode (A).

Regarding claim 3, Namiki discloses at least in figures 1 and 2 the opposing parts (x12, y12) of each display electrode (X,Y) are symmetrically positioned between the pair of display electrodes (X,Y).

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Regarding claim 5, Namiki discloses at least in figures 1 and 2 the opposing parts (x12) are disposed at a plurality of locations along each display electrode (X,Y) in the row direction, and each gap (D) between adjacent opposing parts of a same polarity is narrower than a width of the address electrode (A).

**Claim 1-3, 6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Amemiya et al (USPN 6525470; "Amemiya").**

Regarding claims 1 and 10, Amemiya discloses at least in figures 10 and 11 a plasma display panel in which a plurality of pairs of display electrodes (X,Y) extending in a row direction are aligned on a surface of a first substrate (11), a plurality of address electrodes (D) extending in a column direction are disposed in a stripe pattern on a surface of a second substrate (16), the first and second substrates are disposed opposite each other so that the pairs of display electrodes and the address electrodes cross over sandwiching discharge space (18) therebetween, and a discharge cell (not labeled) is formed corresponding to each crossover portion, wherein the pairs of display electrodes (X,Y) are composed of a metallic material (see at least col. 1, ll. 34-38), each display electrode of each pair of display electrodes (X,Y) comprises a base part (13) extending in the row direction and a plurality of opposing parts (12d) extending from the base part into a discharge interval (not labeled) between the each pair of display electrodes (X,Y), and in each discharge cell, at least two discharge starting gaps (not labeled) are formed, each discharge starting gap existing between opposing parts (X12d, Y12d) that respectively belong to each of the pair of display electrodes (X,Y) and being at least partially over the address electrode

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(D), and discharge space (not labeled) existing between the each discharge starting gap (not labeled) and the address electrode (D).

Regarding claim 2, Amemiya discloses at least in figures 10 and 11 each opposing part (12d) is constructed from a connecting part (12c) that extends from the base part (13) into the discharge interval (not labeled) between the pair of display electrodes (X,Y) and a main discharge part (12c) that extends in the row direction from the connecting part, the main discharge part (12c) being longer than a column-direction width of the connecting part (12c), and each discharge starting gap (not labeled) is formed between two main discharge parts (12c) that respectively belong to each of the pair of display electrodes (X,Y).

Regarding claim 3, Amemiya discloses at least in figures 10 and 11 the opposing parts (12d) of each display electrode (X,Y) are symmetrically positioned between the pair of display electrodes (X,Y).

Regarding claim 6, Amemiya discloses at least in figures 10 and 11 in each discharge cell, each display electrode (X,Y) is provided with a plurality of the opposing parts (X12d) disposed in a column direction, and a width of each discharge starting gap (not labeled) is set to be narrower than a width of the address electrode (D).

Regarding claim 8, Amemiya discloses at least in figures 8 and 9 a dielectric layer (25) is provided so as to cover the display electrodes (X,Y) on the surface of the first substrate (11) on

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which the display electrodes are aligned, and in each discharge cell, a thin layer area (25b) is provided in the dielectric layer in correspondence with each position of main discharge gaps (not labeled).

Regarding claim 9, Amemiya discloses at least in figures 8 and 9 a dielectric layer (25) is provided so as to cover the display electrodes (X,Y) on the surface of the first substrate on which the display electrodes are disposed, and in each discharge cell, one or more thick layer area (not labeled) is provided in the dielectric (25) layer in correspondence with positions of gaps (not labeled) between adjacent opposing parts of a same polarity.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namiki in view of Amemiya (USPGPUB 20030001501; "Amemiya'501").**

Regarding claim 4, Namiki is silent to the address electrodes including branch parts.

However, Amemiya'501 teaches at least in figure 1, the address electrode (D) includes, at least in each discharge cell (C), a plurality of branch parts (Da) extending in the column direction, and in each discharge cell (C), each discharge starting gap (g) is positioned over a

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branch part, discharge space existing between the each discharge starting gap and the branch part, and this configuration allows for a more stable plasma discharge.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Namiki with the recited address electrode branch parts, to allow for a more stable plasma discharge.

Regarding claim 7, Namiki is silent to the auxiliary barrier ribs being individually disposed extending in the row direction between discharge cells that are adjacent in the column direction.

However, Amemiya'501 teaches that this configuration allows for reduced cross-talk and improves luminescence.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Namiki with the auxiliary barrier ribs to allow for reduced cross-talk and improve luminescence.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

By   
Peter Macchiarolo  
Patent Examiner, Art Unit 2879  
(571) 272-2375